

REMARKS

2. The rejection of claims 9-16 and 25 which were rejected in Office Action mailed on or about 22nd July 2003 under 35 USC 102 or 35 USC 103; these claims are rejected under either 35 USC 102 or 35 USC 103 herein for substantially the same reasons as provided in the previous Office Action which is incorporated herein and made a part hereof.

For the reasons set forth in the undersigned's previous reply, the Examiner's rejections are respectfully traversed. Nevertheless, in the interest of speeding allowance of the pending claims, applicant has amended the claims to further clarify the claimed method of manufacturing.

Claim 9, as amended, now recites that, subsequent to the etching of the metal layers disposed on the substrate layers, the plurality of substrate layers (being at least three layers) are simultaneously fusion bonded to each other and, by this simultaneous fusion bonding of a plurality of layers, there is a connection of metal layers to form groundplanes and there is a connecting of coupler segments by a transmission line structure.

The prior art cited by the Examiner does not disclose simultaneous fusion bonding of substrate layers to form a transmission line coupler as recited by claim 9. In contrast to the invention of claim 9, which recites the simultaneous fusion bonding of a plurality of substrate layers, Swarup discloses a device that is formed by a layer-by-layer (i.e., sequential rather than simultaneous) laminating of layers to each other. That is, Swarup discloses that only two layers are joined at a time. Swarup's approach is understood to be restricted to a layer-by-layer laminating for at least the reason that Swarup's forming of interconnecting vias occurs post-laminating of each layer and requires that the layer remains exposed in order for interconnecting vias to be drilled through an added layer to other layers of the structure being formed. This is clearly disclosed at Column 4, lines 29-50 of Swarup which discloses, among other things, that a multi-layer device is formed by (i) laminating each of multiple substrate layers to each other one at a time, and (ii) forming connections between the separately-laminated substrate layers one layer at a time by (a) drilling via holes through an added layer and then (b) plating the via holes. Thus, Swarup's interconnections are formed through separate layer-by-layer steps wherein via

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holes are drilled through each newly added layer and plated before the lamination of a next layer onto said newly added layer. In contrast, the present application discloses, and claim 9 recites, a method of manufacturing wherein (i) substrate layers are each etched, and interconnecting vias formed, prior to bonding, and (ii) all of the etched layers are then simultaneously bonded to each other. See, e.g., page 17 line 5 through page 29 line 5 of the filed specification.

It is respectfully submitted that, because the prior art Swarup reference cited by the Examiner both alone, and in combination with the purported teaching of the prior art (as set forth in the section entitled "Claim Rejection s- 35 USC § 103" of the Office Action dated 7/22/2003) does not disclose or suggest a method of manufacturing a transmission line coupler that includes the simultaneous bonding of substrate layers as recited by claim 9, the Examiner's rejection of claim 9 under 35 U.S.C. § 102 and/or 35 U.S.C. § 103 is not supported. It is respectfully requested that the Examiner withdraw the claim rejection and allow the claim.

Claims 10-16 and 25 depend, directly or indirectly, from claim 9 and are patentable for at least the reasons stated with respect to claim 9.

Claims 26-34 are added. Claims 26-34 parallel the structure of claims 1-16 and 25. Claims 26-34 are believed to be patentable for at least the reasons stated with respect to claims 1-16 and 25.

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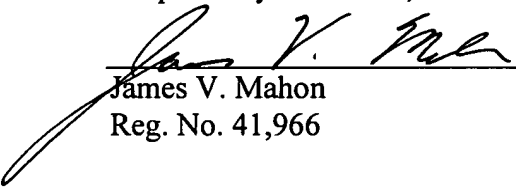
CONCLUSION

Claims 9-16 and 25-34 are now pending and believed to be in condition for allowance. Applicant respectfully requests that the Examiner withdraw his rejections and that the pending claims be allowed.

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Respectfully submitted,

  
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